

# Insecutor Inscitiae Menstruus

Vol. II

DECEMBER, 1914

No. 12

## NEW DATA AND SPECIES IN SIMULIIDÆ

(*Diptera*)

By FREDERICK KNAB

The theory that Simuliidæ are the agents for transmitting pellagra has awakened wide interest in this group of blood-sucking flies and has caused them to be more extensively investigated. Considerable advance has been made in our knowledge of the group systematically, but much yet remains to be learned. Contributions, under existing circumstances, must be necessarily fragmentary, but it is hoped that such will lead to a revision of revisions.

### **Simulium pulverulentum**, new species.

Female: Occiput, frons, and face gray pruinose; frons broad above, greatly narrowed to near the antennæ. Antennæ short, the two basal joints dull ferruginous yellow, the others blackish, clothed with pale pubescence, the tip pointed. Scutum almost uniformly blackish with gray pruinosity, an ill-defined, straight, median black line extending the entire length, and outwardly broader, hardly perceptible, sinuate stripes of the usual conformation; vestiture of small, hair-like silvery scales, rather dense and nearly uniformly distributed. Scutellum broad, short, bluntly rounded, concolorous with the mesonotum and with longer, transversely directed, silvery hair-like scales. Postnotum blackish. Pleuræ dark gray pruinose, the pteropleuræ paler. Abdomen subcylindrical, dull black, without marked plications, the basal segment paler. Legs black and white, the small, appressed hair-scales on femora and tibiæ pale and shining; anterior coxæ, trochanters, and bases of all the femora dull ferruginous yellow; anterior tibiæ white on the basal two-thirds, a blackish ring close to base, the tarsi wholly black and with the first joint long and rather slender;

middle tibiæ whitish at base and with a whitish ring at basal third, the first tarsal joint white on the basal two-thirds; hind tibiæ broadly whitish at base, a whitish ring before the middle, the first tarsal joint white on the basal two-thirds, the second with a white ring at base. Claws with a minute acute tooth close to base. Wings hyaline, a predominately reddish iridescent spot in the anal field; venation normal, the thick veins yellowish brown, spines and setulæ black. Halteres with dark stem and white knob.

Length: Body about 1.8 mm., wing 2.8 mm.

Punta Gorda, British Honduras (J. D. Norton).

Type, Cat. No. 19111, U. S. Nat. Mus.

Described from a series of 35 specimens in poor preservation. The species is remarkable for the peculiar double annulation at the bases of the tibiæ and the almost uniformly gray mesonotum rather densely clothed with evenly distributed hair-like scales.

### ***Simulium rubicundulum*, new species.**

Female: Occiput blackish gray pruinose; frons moderately broad, narrowed very slightly toward antennæ, pale gray pruinose, with scattered fine black hairs. Antennæ stout, blunt at tip, the first two joints yellow, the others brownish gray, all strongly whitish pruinose. Scutum tinted dull reddish beneath a dense pale gray pruinosity, a narrow black median line becoming obsolete on anterior half, a pair of sinuate bare black stripes of uniform width throughout and forming the usual lyre-pattern, extending from anterior margin to the broad black shade in front of the scutellum, the black shade extending forward along lateral margins nearly to humeri; vestiture of small, very slender, white hair-scales not disposed in groups or rows. Scutellum narrow, roundedly triangular, reddish, clothed with transverse, long and slender white hair-scales. Postnotum rather narrow and elongate, blackish, strongly white pruinose. Pleuræ blackish gray pruinose, the propleuræ and anterior coxæ pale ochraceous yellow. Abdomen subcylindrical, dorsally dull black, the margins of the segments gray; venter pale gray. Legs ochraceous, marked with black and white. Fore legs with the femur yellow, the tibia with a narrow subbasal black ring and the apical third black; tarsi wholly black. Middle legs with the femur yellow, blackish at apex; tibia with a blackish subbasal ring and the apical portion broadly blackened; tarsus with the first joint white, its apical third black, the second joint black with broad white basal ring,

the last three joints all black. Hind legs with the femur yellow, blackened toward apex; tibia mostly black, the base and an incomplete broad ring before middle pale; tarsi with the first joint whitish, its apical third and the lower margin blackened, the second joint white basally, black on apical half, third joint narrowly pale at base, the last two joints wholly black. Claws with a stout tooth near base. Wings hyaline, the venation normal; thick veins ferruginous yellow; no iridescent spot in anal field. Halteres pale yellow, infuscated at base.

Length: Body about 3 mm., wing 4 mm.

Córdoba, Mexico, December 17, 1907, one female (F. Knab); Las Vegas Hot Springs, New Mexico, August 7, one female (H. S. Barber).

Type, Cat. No. 19112, U. S. Nat. Mus.

The reddish shade of the mesonotum is not strong and is further obscured by the strong gray pruinosity; in certain lights the ground-color appears very dark and the markings described above as black stand out strongly white-pruinose. The specimen taken in December at Córdoba was no doubt a straggler out of season.

The species just described agrees closely in coloration, size, and structure with *Simulium rubrithorax* Lutz, which occurs in southern Brazil and of which two females are before me, kindly transmitted by Dr. Lutz. This latter species has the terminal joint of the antennæ longer and more tapered; the frons is slightly narrower and almost parallel-sided; the hairs on the frons are coarser and disposed in four rows, of which the outer ones are very obvious. In *rubicundulum* the hairs of the frons are finer and scattered over the surface without the least tendency to form rows. Another case of vicarious closely similar species, that of *Simulium escomeli* and *S. bivittatum*, has already been pointed out (Proc. Biol. Soc. Wash., xxvii, 1914, p. 83).

### ***Simulium trivittatum* Malloch.**

*Simulium distinctum* Malloch, Proc. Ent. Soc. Wash., xv, 133 (1913).

*Simulium trivittatum* Malloch, Tech. Ser. 26, Bur. Ent., 29, 30 (1914).

*Simulium distinctum* Malloch, Tech. Ser. 26, Bur. Ent., 25, 29, 30 (1914).

Examination of the type material described under *distinctum* and *trivittatum* leaves no room for doubt that the two are conspecific. The type of *trivittatum* (female) and the two female paratypes of *distinctum* agree in every detail. Contrary to what is indicated in Technical Bulletin 26, page 29, the abdomen of the type specimen of *trivittatum* is most distinctly marked, showing three series of black spots on a pale

ground. This specimen was evidently captured when fresh and still unfed. The female *distinctum* are older specimens that had fed and are partly crushed; in consequence the abdominal markings are obscured, although still clearly discernible in one of the specimens. The name *distinctum* had already been applied to a Brazilian species of *Simulium* by Lutz in 1910; *trivittatum* therefore supersedes it in the present case.

### **Parasimulium** Malloch.

Tech. Ser. 26, Bur. Ent., 24 (1914).

The genus *Parasimulium* was founded on a single specimen stated to be a female. The type of *Parasimulium furcatum* Mall. is a male, instead of a female, as already appears from the description through the indication of enlarged facets on the lower part of the eyes, a common and well-known male character in certain families of Diptera. The male clasping organs are plainly visible in the specimen and furthermore are yellow, contrasting conspicuously with the dark body-color. Thus the genus is erroneously conceived. The specimen shows some striking peculiarities and probably the genus can be reestablished on other characters when the female is discovered.

## **SOME NEW CHALCIDOIDEA**

By J. C. CRAWFORD

Both of the following new species of the genus *Tetrastichus* belong to the section which bears only one bristle on the submarginal vein.

### **Tetrastichus compsivorus**, new species.

Female: Length 1 mm. Black, the femora dark brown, the tibiae lighter, the middle and hind tarsi whitish; first joint of funicle distinctly shorter than pedicel, the second about as long as the first, the third shorter, hardly longer than broad; club about as long as joints 1 and 2 of funicle; mesonotum sericeous, the median groove on mesoscutum and discal pair on scutellum faint; propodeum short, the medial carina no longer than metanotum; wings brownish; submarginal with one bristle.

Male: Length 0.87 mm. Similar to the female except for secondary sexual characters.

Type locality; Chickasha, Okla.

Host: Eggs of *Compsus auricephalus*.